



1                   8.       The mobile station of claim 7, wherein said preferential channel  
2 assignment request further comprises an identification of a preferential channel usage  
3 request packet.

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1            17.     The base station controller of claim 16, further comprising:  
2            a channel control table for registering said link layer connection control  
3            table for each of said base stations; said channel control table comprising:



8 base station controller a reply to authorize priority processing, said reply enabling said  
9 priority-requesting mobile station to use a wireless channel preferentially.

1 21. The packet data service node of claim 20, further comprising:  
2 a mobile station information table for registering information about  
3 priority channel usage authorization.

1 22. The packet data service node of claim 21, wherein:  
2 said control section, upon receiving said priority request, refers to said  
3 mobile station information table and sends a reply to permit priority processing to said  
4 base station controller if said priority requesting mobile station has been registered for  
5 priority channel usage, otherwise sends a reply to disallow priority processing to said base  
6 station controller if said priority requesting mobile station has not been registered for  
7 priority channel usage.

1 23. A mobile communication system comprising:  
2 a base station controlled by a base station controller;  
3 at least one of a plurality of mobile stations, in communication with said  
4 base station using wireless communication channels, wherein  
5 said base station controller releases a wireless communication channel  
6 from said mobile station when no transmission nor reception between said mobile station  
7 and said base station occurs for a time period exceeding a threshold period, and wherein:  
8 a priority-requesting mobile station requesting a preferential use of a  
9 wireless communication channel sends a priority request to said base station; and  
10 said base station controller receives said priority request through said radio  
11 base station, and upon reception of said priority request, said base station controller  
12 transmits acknowledgement to said mobile station.

1 24. The mobile communication system of claim 23, wherein:  
2 said mobile station transmits said priority request periodically.

1 25. The mobile communication system of claim 23, wherein:  
2 said base station controller does not release said wireless channel when a  
3 prior channel usage contract of said mobile station is registered to a packet data service  
4 node to which said base station controller connected.

1           26.    A mobile communication system comprising:  
2               a base station controlled by a base station controller;  
3               at least one of a plurality of mobile stations, in communication with said  
4 base station using wireless communication channels, wherein  
5               said base station controller releases a wireless communication channel  
6 from said mobile station when no transmission nor reception between said mobile station  
7 and said base station occurs for a time period exceeding a threshold period, and wherein:  
8               a priority-requesting mobile station requesting a preferential use of a  
9 wireless communication channel sends a priority request to said base station; and  
10              said base station controller receives said priority request through said radio  
11 base station, and thereupon assigns said wireless communication channel to said priority-  
12 requesting mobile station.

1           27.    The mobile communication system comprising:  
2               a radio base station;  
3               a base station controller, operative to control said radio base station;  
4               at least one mobile station; wherein said at least one mobile station is in  
5 communication with said radio base station; and wherein  
6               said base station controller receives a wireless channel assignment request  
7 from said mobile station, which transmitted a priority request for requesting priority use  
8 of a wireless channel, and wherein, in case of shortage of wireless channels exists, said  
9 base station controller releases a wireless channel from a non-preferred mobile station,  
10 and assigns said released wireless channel to said requesting mobile station.

1           28.    The mobile communication system of claim 27, wherein said base  
2 station controller releases said wireless channel from said non-preferred mobile station  
3 which has not transmitted and/or received signals for a longest period.

1           29.    The mobile communication system of claim 27, wherein said base  
2 station controller releases said wireless channel when a prior channel usage contract of  
3 said channel assignment requesting mobile station is registered to a packet data service  
4 node to which said base station controller connected.

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42. A computer program product for establishing a priority communication channel, said computer program product comprising:

- code that transmits a priority request for use of a wireless channel;
- code that sets a first timer with a timeout value less than a timeout value of a second timer;
- code that periodically transmits said priority request at expiration of said first timer provided that said second timer has not expired; and

wherein, responsive to said periodically transmitting said priority request, said priority use of said wireless channel is maintained; and

a computer readable storage medium for holding the codes.

1           43.    A computer program product for establishing a priority  
2 communication channel, said computer program product comprising:  
3           code that receives a priority request for use of a wireless channel;  
4           code that determines that a priority usage of said wireless channel is  
5 permissible;  
6           code that sets a timeout value to a timer;  
7           code that releases said priority usage of said wireless channel at expiration  
8 of said timer unless at least one of: a periodic priority request is received, a transmission  
9 is received and a transmission is made; and  
10          wherein, responsive to at least one of: a periodic priority request is  
11 received, a transmission is received and a transmission is made, said priority use of said  
12 wireless channel is maintained; and  
13          a computer readable storage medium for holding the codes.

1           44.    A computer program product for establishing a priority  
2 communication channel, said computer program product comprising:  
3           code that receives a preferential channel assignment request from a base  
4 station controller, and  
5           code that transmits a reply to authorize said base station controller to  
6 assign a wireless channel preferentially; and  
7           a computer readable storage medium for holding the codes.

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